

Remarks

Applicants have amended the specification to address informalities. Applicants have also amended claims 1 and 7 to more fully describe the invention.

The specification stands objected to due to informalities. Specifically, the examiner noted a typographical error in paragraph 6 and a grammatical error in paragraph 10. The amendments to these paragraphs have corrected these informalities.

Claims 2-3 and 8-9 stand objected to due to informalities. Specifically, the Detailed Action states that these claims are objected to for being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. However, this rationale for objection is actually the rejection rationale under 35 U.S.C. § 112, second paragraph. Therefore, applicants will address this objection as a rejection under this section. Specifically, the Detailed Action indicates that the above referenced claims select parameters based upon a group of parameters or a combination from the group of parameters, but it is unclear as to which parameter the invention is claiming in particular.

Claims 1 and 7 set forth the element of surface parameters, which, pursuant to the limitations of the claims, are monitored as part of the method. Claims 2 and 8 more fully define these surface parameters as being vegetation cover, vegetation density or a combination thereof. Claims 3 and 9 more fully define these surface parameters as being suspended sediment concentration in water, turbidity in water, or a combination thereof. These claims both set forth a potential list of surface parameters of interest as set forth in claims 1 and 7. These lists are set forth as proper Markush type groups that relate directly to the element set forth in the independent claims. Therefore, applicants believe

that the claims are clear and definite as required under 35 U.S.C. § 112, second paragraph.

Claims 1-4, 6-10, and 12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Cohen (US 6,161,075). Specifically, with regards to claims 1 and 7, the Detailed Action states that Cohen discloses the limitations of applying subtraction techniques to remove the effect of sun elevation and cloud cover variations in claims 7 and 14. The Detailed Action further states that while Cohen does not specifically disclose the use of a ratioing technique, it is well known in the art to use subtraction or ratioing techniques to remove erroneous readings, and, therefore, it would be obvious to one skilled in the art to replace the subtraction technique with a ratioing technique to obtain the present invention.

Applicants humbly submit that the examiner has not met the requirements of a valid obviousness type rejection. In order to make a proper obviousness rejection, all of the limitations of the claims at issue must be present within the prior art. First, the limitation of applying the ratioing technique to remove the effect of sun elevation and cloud cover variations are not disclosed within the prior art. The examiner's assertion that the subtraction technique disclosed within Cohen is similar to the ratioing technique of the present invention is unpersuasive. In order to use the subtraction technique disclosed within Cohen, one must have actual or assumed measurement values for the cloud parameters. One of the main, unique features of the present invention is that ratioing the spectral radiance allows one to obtain the information required without obtaining sun elevation or cloud cover variation data. This limitation is not disclosed anywhere within the prior art references.

Also, the mere statement that "it is well known in the art to use subtraction or ratioing or integration techniques to remove erroneous readings" is insufficient to meet the PTO's burden for an obviousness rejection. Even if this statement was correct, applicants assert it would be necessary to produce a reference that linked a ratioing technique to removal of sun elevation and cloud cover variations in the type of method of the present invention in order to make a valid obviousness type rejection. Thus, applicants assert that the above referenced obviousness type rejection is improper.

Second, the amended claims 1 and 7 contain two unique limitations. One being the ratio of spectral radiance measurements directly correlating to spectral reflectance values and the other correlating the ratio of spectral radiance measurements to the surface parameters of interest. These limitations are not found anywhere within the prior art. As noted within the specification of the present application, other spectral radiometers must use spectral reflectance data to correlate to the surface parameters of interest. The present invention, by using the ratio of the spectral radiance measurements, obviates this requirement. Because none of the references disclose this limitation, no proper obviousness rejection can be made.

Because all of the claims within the present application depend upon claims 1 and 7 and the above arguments obviate the rejections referenced above, then the obviousness arguments related to the dependent claims are moot.

Accordingly, applicants believes that claims 1-12 are in condition for allowance and respectfully requests the examiner to withdraw all objections and rejections and allow said claims. Should the examiner need more information regarding this matter or

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have further suggestions regarding this application, feel free to call the undersigned at
301-744-5603.

Respectfully submitted,



Mark Homer, Reg. No. 41,848
Attorney for Applicant

OFFICE OF COUNSEL, CODE OC4
NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
101 STRAUSS AVE., BLDG. D-31
INDIAN HEAD, MD 20640-5035